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(71) Applicant(s)
Wei Jiang
41 Wenhua Street, Heping District, Shenyang, Liaoning Province 110003, China

(72) Inventor(s)
Wei Jiang

(74) Agent and/or Address for Service
Boult Wade Tennant
27 Furnival Street, LONDON, EC4A 1PQ, United Kingdom

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(54) Compositions with antidecrepit action

(57) Compositions with anti-decrepit action contain the alcohol extracts of Male bombycid, Cornu cervi pantotrichum, Genitals of an ass, Radix ginseng, Herba epimedii and Radix achyranthes bidentatae. Composition has therapeutic action on the prostate gland, and activity against presbyopia and other symptoms of "deficiency of Yang (vitality)" caused by decreptitude.

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A PHARMACEUTICAL COMPOSITION HAVING ANTI-DECREPIT ACTION AND A PROCESS FOR PREPARATION THEREOF

This invention relates to a pharmaceutical composition and its preparation, in particular a pharmaceutical composition with anti-decrepit action and its preparation.

Some diseases such as presbyopia, prostatomegaly (hypertrophy of the prostate) are closely concerned with biobody's decrepit. At present, there isn't any drug which can cure presbyopia among the drugs in markets, but there are some drugs such as Qianliekang, tablet Zhulinan which can lysis the symptom of prostatomegaly in addition to operation to cure it.

For a long time, people have been trying to use traditional Chinese medicines for the treatment of those diseases caused by decreptitude as described above. But because of the inadequate methods for preparing traditional Chinese medicines, for example, using high temperature and high pressure to decoct, the effective constituents of traditional medicines can be destroyed in those conditions, and their activities will be deceased.

An object of the present invention is to overcome the drawbacks of the prior art to provide a pharmaceutical composition with anti-decrepit action to warm blooded mammals and human.

Another object of this invention is to provide a process for preparing the pharmaceutical composition having anti-decrepit

action to warm blooded mammals and human.

A further object of this invention is to provide an application of the pharmaceutical composition for treating warm blooded mammals' and human's diseases caused by decrepit of biobody.

The pharmaceutical composition of this invention mainly consisting of 60-80% alcohol extractives (extractable matter) of traditional Chinese medicines, which are mainly male bombycid, cornu cervi pantotrichum, genital of ass, radix ginseng, herba epimedii and radix achyranthes bidentatae.

The weight ratio of the used materials is as follow:

Male bombycid (Xiongcan'e)	20-60
Cornu cervi pantotrichum (Lurong)	1-4
Genital of ass (Lushen)	1-4
Radix ginseng (Renshen)	1-6
Herba epimedii (Yinyanghuo)	1-4
Radix achyranthes bidentatae (Niuxi)	1-4

Besides the alcohol extractives of those materials as described above, the pharmaceutical composition of this invention can also contain alcohol extractives of materials as follow (weight ratio):

Semen trigonellea (Huluba)	1-5
Rhizoma curculiginis (Xianmao)	1-5
Semen cuscutae (Tusizi)	1-4

Herba cistanches (Roucongrong)	**1-4**
Fructus cnidii (Shechuangzi)	**1-4**

or also contains the alcohol extractives of (weight ratio):

Semen trigonellae (Huluba)	**1-5**
Rhizoma curculiginis (Xianmao)	**1-5**
Semen cuscutae (Tusizi)	**1-4**
Semen allii tuberosi (Jiucaizi)	**1-4**
Radix ophiopogonis (Maimendong)	**1-4**
Fructus foeniculi (Xiaohuixiang)	**1-4**
Cortex cinnamomi (Rougui)	**1-4**
Radix glycyrrhizae (Gancao)	**1-4**

In order to prepare the pharmaceutical composition as described above, the process according to the invention **comprises the steps of:**

(1) crushing (weight ratio):

Male bombycid (Xiongcan'e)	**20-60**
Cornu cervi pantotrichum (Lurong)	**1-4**
Genital of ass (Lushen)	**1-4**
Radix ginseng (Renshen)	**1-6**

into crude powder, and adding 30 to 60% ethanol to moisten the crude powder, allowing the moistened powder to stand in an airtight enclosure for 12 to 36 hours, and percolating the moistened crude powder by using 6 to 90 weight ratio of alcohol, and collecting the percolated solution;

(2) refluxing materials consisting of (weight ratio):

Herba epimedii (Yinyanghuo)	1-4
Radix achyranthes bidentatae (Niuxi)	1-4

for 2-4 hours by using 60%-80% ethanol which is 5 times amount of the materials and obtaining the extractive A, filtering the extractive A to obtain filtrate (1) and the residue; refluxing the residue 0.5-1.5 hours by using 60-80% ethanol which is 3 times amount of the residue to obtain extractive B, and filtering the extractive B to obtain filtrate (2); combining filtrate (1) and (2) to obtain filtrate (3);

(3) evaporating the filtrate (3) under reduced pressure and concentrating the evaporated filtrate (3) to form a dilute extractive with comparative density being 1.15-1.20 at 20-25 degree centigrade;

(4) combining the percolate solution in step (1) with the dilute extract in step (3), adding medicinal accepted carrier to obtain the pharmaceutical composition having anti-decrepit action.

The materials in step (2) may also contain (weight ratio):

Semen trigonellea (Huluba)	1-5
Rhizoma curculiginis (Xianmao)	1-5
Semen cuscutae (Tusizi)	1-4
Herba cistanches (Roucongrong)	1-4

Fructus cnidii (Shechuangzi)	1-4

or also contains (weight ratio):

Semen trigonellae (Huluba)	1-5
Rhizoma curculiginis (Xianmao)	1-5
Semen cuscutae (Tusizi)	1-4
Semen allii tuberosi (Jiucaizi)	1-4
Radix ophiopogonis (Maimendong)	1-4
Fructus foeniculi (Xiaohuixiang)	1-4
Cortex cinnamomi (Rougui)	1-4
Radix glycyrrhizae (Gancao)	1-4

The pharmaceutical composition can be formulated into the oral solution, capsule, injectable solution, tablet, syrup, pill et al.

Deficiency of vitality is the manifestation of biobody's decreptitude. Drugs for reinforcing vital function in traditional Chinese medicine are mainly that of reinforcing vital energy or essence of the kidney. For example, Radix ginseng can greatly reinforce vital energy, promote secretion in the body, and relieve thirst. Cornu cervi pantotrichum can promote reproductive essence, strengthen physique; it mainly cures impotence, lack of strength in loin and knee, spermatorrhea, et al. Herba epimedii can strengthen physique, dispel rheumatism, cure impotence and rheumatic pain. Genital of ass can invigorate function of kidney and strengthen tendons, cure impotence, weakness, and sour in bones and tendons, spenting of evil heart in both Qi (inner defensive) system and Xue (blood) system, et al. Male bombycid can

strengthen vital energy or essence of the kidney by reinforcing the function of the liver, invigorate Yang (vital function) and treat spontaneous seminal emission, cure impotence, emission, leukorrhagia, hematuria, injury, ulcer and scald. Radix achyranthes bidentatae can reinforce the function of liver and kidney, strengthen physique, cure the pain in loin and knee, contracture of the four limbs, et al. Besides, some other medicinal herbs such as Herba cistanches, Semen cuscutae, also have the effect of reinforcing the function of the kidney.

The pharmaceutical composition of this invention involves the choice of some medicines as described above which have the effect of reinforcing vitality, and to provide combination recipe in a reasonable or convenient manner. The process of the invention involves the use of a satisfactory process to prepare the pharmaceutical composition which has the effect of strengthening the vital functions by reinforcing vital energy or essence of kidney, adjusting the blood system, strengthen physique, increasing essence and marrow. This pharmaceutical composition has better effect for old people's prostatomegaly and presbyopia.

The mentioned process of preparation of the pharmaceutical composition of this invention uses an alcohol solution to percolate and extract. This avoids the conventional high temperature and high pressure, and preserves the effective constituents of the materials of traditional Chinese medicines to a great extent.

The above mentioned beneficial effects are described in detail for better understanding in the following Examples.

Examples 1-3

Preparation of percolate

Preparation: recipes of percolate of different concentration as follow:

Material	Examples (gram) 1	2	3
Male bombycid	500	1000	1500
Cornu cervi pantotrichum	100	25	25
Radix ginseng (Red ginseng)	1000	150	25
Genital of ass	100	50	25

The materials as described above were combined and crushed into crude powder. 30 degree white spirit was added to moisten the crude powder. The moistened crude powder was allowed to stand in airtight enclosure then it was percolated by 38 degree white spirit and 2000 ml percolate was collected. Details are shown in table 1.

Table 1

Examples	1	2	3
Time (standing in airtight enclosure) (hours)	18	24	36

Examples 4-6

Preparation of Dilute Extract

Preparing dilute extracts using three kinds of constituents, the recipes being as follows:

Materials	Examples (gram) 4	5	6
Herba epimedii	100	50	25
Radix achyranthes bidentatae	50	100	25
Semen trigonellae	125	80	25
Rhizoma curculiginis (spirit treatment)	125	80	50
Semen cuscutae	25	50	100
Herba cistanches	25	25	25
Fructus cnidii	25	25	100
Semen allii tuberosi	/	50	25
Radix ophiopogonis	/	75	25
Fructus foeniculi (salt treatment)	/	25	100
Cortex cinnamomi	/	50	100
Radix glycyrrhizae	/	25	50

After they were crushed respectively, semen cuscutae, fructus cnidii, semen allii tuberosi and fructus foeniculi together with other materials were combined according to the amounts as described above. The combined mixtures were refluxed with ethanol in accordance with table 2. Filtrates were combined and evaporated under reduced pressure with recollection of ethanol, and with concentration of filtrates to dilute extract which had a comparative density of 1.15-1.20 (measured at 20 degrees centigrade).

Table 2

Examples	4	5	6
Ethanol concentration for reflux	65	70	75
The 1st reflux			
amount of ethanol (ml)	2400	3000	3250
time of reflux (hour)	2.0	3.0	4.0
The 2nd reflux			
amount of ethanol (ml)	1400	2000	2000
time of reflux (hour)	0.5	1.0	1.5
The comparative density of dilute extract after concentrating (20°C)	1.15	1.20	1.19

Examples 7-9

Preparing Oral Solution

The percolates were combined to the dilute extracts according to the following:

Examples	7	8	9
percolate prepared in example	1	2	3
dilute extract prepared in example	4	5	6

The combined mixtures were diluted by adding 3500 ml of water, filtered to obtain filtrates to provide the oral solutions of the pharmaceutical composition of the present invention.

Example 10

The percolate produced in example 2 was combined with the dilute extract of example 5, and a powder was produced vacuum drying the mixture. Capsules containing the composition were made by using the techniques well-known in the art.

Example 11

The percolate produced in example 3 was combined with the dilute extract of example 6, and obtained powder by vacuum drying the mixture. An injectable solution was made by usuing the techniques well-known in the art.

Experiment 1-4

Materials

Drugs:

1. The pharmaceutical composition, made in example 7, was concentrated on a water bath to evaporate alcohol. An aqueous solution of the required concentration was prepared just before using.

2. Qianliekang was made in Hexi Pharmaceutical Factory, China. In the experiment, it was ground into fine powder in a mortar together with water. A turbid solution of the experimental material needing concentration was prepared.

3. Testosterone propionate, manufactured by East-northern No.6

pharmaceutical factory, was prepared as a solution of the experimental concentration by using ethyl oleate.

4. Jinkuishenqiwan, manufactured by Liaoning Traditional Chinese Medical College Pharmaceutical Factory, was prepared into solution turbid.

5. Hydroxy urea, provided by Shanghai Institute of Biochemistry, Chinese Academy of Sciences.

Animals:

The mice of Kunming strain, either sex were used, were provided by the animal laboratory of Shenyang Pharmaceutical College.

Experiment 1

Restraining action on prostatomegaly of the mice

Fifty-five mice, male, weighting 19-25 g, were used and randomly divided into 5 groups. The mice in the control group were administered with ethyl oleate 5ml/kg by hypodermic injection. The mice in other four groups were all administered with testosterone propionate 5ml/kg by hypodermic injection. Then, the mice in both the ethyl oleate group and the testosterone propionate group were administered equal volume normal saline by p.o.. The mice in both the small dose group and the big dose group, were respectively administered p.o. with the pharmaceutical composition of the present invention 2g/kg and 4g/kg. The mice in the positive

comparative drug were administered with Qianliekang 2g/kg by p.o. Administered for 10 days continuously one time per day. On the eleventh day, the mice were killed and anatomized to take off the prostate. The prostates were weighed and the prostate index was calculated (mg per gram of weight). A statistical T examination was done to compare the data of each group. Results were shown in table 3.

Table 3. Restraining action on the mice's prostatomegaly caused by testosterone propionate (x±SD).

Group	Number of mice	Dose (g/kg)	Weight of prostate (mg)	Prostate index mg/kg
Ethyl oleate + normal saline	11	equal volume	29.5±7.0	0.95±0.20
Testosterone propionate + normal saline	11	equal volume	43.4±5.6###	1.57±0.23###
P.C. + Testosterone propionate	11	2.0±0.005	34.8±4.6***+	1.14±0.34***+
P.C. + Testosterone propionate	11	4.0±0.005	36.9±4.0***+	1.22±0.07*****++
Qianliekang + Testosterone propionate	11	2.0±0.005	38.3±4.0**	1.34±0.17**

Note:
P.C.: Pharmaceutical composition of the present invention
: P < 0.01, comparing with the ethyl oleate group
** : P < 0.05, *** : P < 0.01,
comparing with the testosterone propionate
+ : P > 0.05, ++ : P < 0.05
comparing with the group of healthy prostate

The results in table 3 showed that both the mice's prostate weight and prostate index in the testosterone propionate group were significantly bigger than that of the mice in the ethyl

oleate group, which indicated that testosterone propionate could cause prostatauxe of mouse. In the pharmaceutical composition of the invention's small dose group (2g/kg), big dose group (4g/kg), and Qianliekang group (2g/kg), the prostate weight and the prostate index of mice were significantly smaller than that of the testosterone propionate group, which indicated that the two dose of the pharmaceutical composition of the invention were not significantly different to compare with that of the mice in the Qianliekang group, which indicated that the doses of the two medicines were equal and the actions were similar.

Experiment 2

Effect on the function of the "deficiency of vitality" mice caused by hydroxy urea

Fifty-five mice, weighing 18-22 g, with either sex, were weighed and the temperatures of the mice's tail skin were measured before the experiment. The mice were randomly divided into five groups. The mice in the control group received p.o. normal saline. The mice in the "deficiency of vitality" model group received p.o. hydroxy urea 300 mg/kg. The mice in the two groups of the pharmaceutical composition of the invention received respectively p.o. 2.0g/kg and 4.0g/kg. The mice in the positive comparative group received p.o. Jinkuishenqiwan 4.0g/kg. Hydroxy urea was given to the mice in the hydroxy urea group, the two groups of the pharmaceutical composition of the invention, and the Jinkuishenqiwan group every morning and the pharmaceutical composition of the invention and Jinkuishenqiwan were given every afternoon. Medi-

cines were given continuously for 7 days. On the eighth day, after weight was weighed and skin temperature was measured, the mice were killed and dissected to take their spleens. These spleens were weighed and spleen indices calculated. T examination of each group data was done and the result was shown in table 4.

Table 4. Effect on weight, skin temperature, spleen weight, spleen index of the mice of "deficiency of vitality" caused by hydroxy urea (x±SD)

Group		Number of mice	Dose (g/kg)	Weight (g)	Skin temp. (°C)	Spleen Weight (mg)	Spleen index (mg/g)
Normal saline	b. ad.	10	e.v.	19.7±1.5	31.8±0.7		
	a. ad.			25.1±1.7	27.5±0.4	144.9±26.9	5.75±0.81
H.U.	b. ad.	10	0.3	19.8±1.6	32.1±0.7		
	a. ad.			### 19.2±2.0	### 26.8±0.3	### 61.0±25.7	### 3.15±1.3
P.C.+ H.U.	b. ad.	10	2.0 + 0.3	19.7±1.5	32.3±0.5		
	a. ad.			###* 18.6±1.2	***# 27.5±0.3	###* 58.8±22.0	###* 3.13±1.0
P.C.+ H.U.	b. ad.	10	4.0 + 0.3	19.6±1.4	32.5±0.5		
	a. ad.			###* 18.7±2.0	***# 27.6±0.3	###* 71.2±21.3	###* 3.79±1.0
JKSQW+ H.U.	b. ad.	10	4.0 + 0.3	20.0±1.6	32.6±0.3		
	a. ad.			###* 19.1±2.4	###*** 28.2±0.4	###* 75.1±30.6	###* 3.91±1.51

H.U.: Hydroxy urea
P.C.: the Pharmaceutical Composition of the invention
JKSQW: Jinkuishenqiwan
b.ad.: before administered
a.ad.: after administered
: P > 0.05, ### : P < 0.01,
comparing with the normal saline group.
* : P > 0.05, *** P < 0.01,
comparing with the hydroxy urea group.

The results in table 4 indicated that the weight, skin temperature, spleen weight, spleen index of the mice in the hydroxy urea group were all significantly lower than that of the mice in the control group ($P<0.01$), which indicated that the model of "deficiency of vitality" caused by hydroxy urea had already been formed. The skin temperature of all the mice in the pharmaceutical composition of the invention small dose group, big dose group, and the Jinkuishenqiwan group was higher than that of the hydroxy urea group ($P<0.01$), and was not significantly different to compare with that of the normal saline group ($P>0.05$), which indicated that the pharmaceutical composition of the invention had the action of preventing decrease of the skin temperature of the "deficiency of vitality" mice caused by hydroxy urea. The weight, spleen weight and spleen index of the mice in the pharmaceutical composition of the invention small dose group, big dose group and the Jinkuishenqiwan group were not significantly different to compare with that of the mice in the hydroxy group ($P>0.05$), which indicated that the pharmaceutical composition of the invention had no effect on decrease of the mice's weight, spleen weight and spleen index caused by hydroxy urea, when using the dose of the composition of this invention in this experiment.

Experiment 3

Anti-inflammatory action on the mice of "deficiency of vitality" caused by hydroxy urea

Sixty-nine mice weighing 18-22 g and of either sex were used and

randomly divided into seven groups. They were divided into two batches for experiment. After measured the volume of the behind-right foot of the mice in each group, the mice in the control group were administered p.o. equal volume normal saline, the mice in the "deficiency of vitality" model group, the pharmaceutical composition of the invention small dose group, big dose group and the Jinkuishenqiwan group were administered p.o. hydroxy urea 300 mg/kg for 7 days continuously. On the eighth day, equal volume normal saline was administered p.o. to the mice in the control group and the model of "deficiency of vitality" group. The pharmaceutical composition of the invention 2.0g/kg, 4.0g/kg were administered p.o. to the mice in the two groups of the pharmaceutical composition of the invention. Jinkuishenqiwan 4.0g/kg was administered p.o. to the mice in the positive medicine comparative group. After thirty minutes, each mouse was injected subcutaneously 1% carrageenan 0.1 ml at the ankle to cause inflammation. During 4 hours after causing inflammation, the mice in each group were measured foot volume. The difference of the foot volume between after and before causing inflammation was used to express the degree of swelling. The results were shown in table 5.

Table 5. Anti-inflammatory action on the mice of "deficiency of vitality" caused by hydroxy urea (x±SD)

Group	Number of mice	Dose (g/kg)	Degree of foot swelling (cm) 1h	2h	3h	4h
Normal urea	10	e.v.	0.084±0.029	0.099±0.042	0.103±0.042	0.99±0.031
Hydroxy urea	10	0.3	0.073±0.025 *	0.060±0.023 **	0.059±0.037 **	0.052±0.024 ***
P.C.+ H.U.	10	2.0 +0.3	0.085±0.026 #*	0.090±0.025 ##*	0.068±0.029 #**	0.030±0.018 ##***
P.C. + H.U.	10	4.0 +0.3	0.088±0.029 #*	0.068±0.038 #*	0.029±0.016 ##***	0.034±0.021 #***
Normal Saline	10	e.v.	0.125±0.015	0.129±0.019	0.119±0.039	0.092±0.027
Hydroxy urea	9	0.3	0.100±0.034 *	0.078±0.024 ***	0.102±0.042 *	0.103±0.038 *
JKSQW +H.U.	10	4.0 +0.3	0.098±0.031 ***	0.111±0.039 ##*	0.097±0.024 #*	0.073±0.028 #*

P.C.: the pharmaceutical composition of the invention
H.U.: Hydroxy urea
JKSQW: Jinkuishenqiwan
*p>0.05, **p<0.05, *** p<0.01 comparing with normal saline group
#p>0.05, ##p<0.05, comparing with hydroxy urea group

The results in the table 5 indicated that the degree of swelling of the foot of the mice in the hydroxy urea group (2,3,4 hours), the small dose of the pharmaceutical composition of the invention group (3,4 hours) and the Jinkuishenqiwan group (1 hour) were smaller than that of the mice in the normal saline group a t certain time ($p<0.05-0.01$) indicated that hydroxy urea had the action of restraining foot swelling of mice caused by carrageenan. The degree of foot swell of the mice in the two groups of the pharmaceutical composition of the invention (the small dose 2 hours, the big dose 3 hours) was smaller than that the mice in the hydroxy urea group, which indicated that the pharmaceutical

composition of the invention had anti-inflammatory action on the "deficiency of fatality" mice. But it couldn't demonstrated that Jinkuishenqiwan had this action.

Experiment 4

Analgesic action on the mice of "deficiency of vitality" caused by hydroxy urea

Forty- nine mice weighing 18-22 g and of either sex were used and randomly divided into five groups. Equal volume normal saline was administered p.o. to the mice in the control group. Hydroxy urea 300mg/kg was administered p.o. to all the mice in the "deficiency of vitality" model group. The two dose groups of the pharmaceutical composition of the invention and the Jinkuishenqiwan group for seven days continuously. On the seventh day, equal volume normal saline was administered p.o. to the mice in both the control group and the "deficiency of vitality" model group. The pharmaceutical composition of the present invention 2.0g/kg and 4.0g/kg were respectively administered p.o. to the mice in the two dose groups of the pharmaceutical composition of the invention. Jinkuishenqiwan 4.0g/kg was administered p.o. to the mice in the positive medicinal comparative group. At 30 minutes after administered, the mice in each group were injected abdominally 0.6% acetic acid solution 0.1ml/10g. The action of body's swing (writhing) and the times of body's swing during 30 minutes were noted. The obtained data were analysed with statistical methods. The results are shown in table 6.

Table 6: Analgesic action on the mice of "deficiency of vitality" caused by hydroxy urea

Group	Number of mice	Dose (g/kg)	Latent period of body's swing (min)	Time of body's swing during 30 minutes (times)
Normal saline	10	e.q.	3.2±1.2	66.7±20.1
Hydroxy urea	9	0.3	4.1±1.1*	37.9±11.7***
P.C.+ H.U.	10	2.0+0.3	3.2±0.8$^{*\#\#}$	55.4±28.5$^{*\#}$
P.C.+ H.U.	10	4.0+0.3	5.4±1.2$^{***\#\#}$	50.2±17.8$^{*\#}$
JKSQW + H.U.	10	4.0+0.3	4.3±1.9$^{*\#}$	50.8±21.5$^{*\#}$

P.C.: the pharmaceutical composition of the invention
H.U.: Hydroxy urea
JKSQW: Jinkuishenqiwan
*p>0.05, ***p<0.01 comparing with the normal saline group
#p>0.05, ##p<0.05 comparing with the hydroxy urea group

The results in table 6 indicated that the times of body's swing of the mice in the hydroxy urea group and the latent period of body's swing of the mice in the big dose of the pharmaceutical composition of the invention group were smaller than that of the mice in the normal saline group, which indicated that hydroxy urea had the action of restraining body's swing of the mice caused by acetic acid. The latent period of body's swing of the mice in the big dose of the pharmaceutical composition of the invention group was significantly longer than that of the mice in the hydroxy urea group ($p<0.05$), which indicated that the pharmaceutical composition of the invention had analgesic action on the mice of "deficiency of vitality". But it couldn't be demonstrated that the Jinkuishenqi pill had this action.

The results of experiments 1-4 indicated:

1. The pharmaceutical composition of the invention had restraining action on prostatauxe caused by testosterone propionate.

2. The pharmaceutical composition of the invention had the protective action on decrease of the skin's temperature of the mice of "deficiency of vitality" caused by hydroxy urea.

3. The pharmaceutical composition of the invention had anti-inflammatory action on the mice of "deficiency of vitality" caused by hydroxy urea.

4. The pharmaceutical composition of the invention had analgesic action on the mice of "deficiency of vitality" caused by hydroxy urea.

Experiment 5

The therapeutical action on the old people's prostatauxe

407 male patients were chosen who had the disease of prostatauxe and were in the age range 46 to 87 years. They were randomly divided into two groups. Group A had 198 men. They had been continuously taking the pharmaceutical composition of the invention (20ml/day which was made in example 1) for three months. Group B had 209 men. They had been continuously taking Ginseng Royal Jelly 5ml which was made in Fushun Qingfeng Pharmaceutical Factory for three months, 2 times a day. All of the 407 men did not take any other medi-

cine relating to the treatment of prostatauxe and did not accept treatment during the three months' therapeutic period.

Before and after taking medicine for three months, they were examined by the rectal touch method. The result was determined according to **"Rule of diagnosis and criterions of cure or taking a favorable turn of clinical disease", which was published by the People's Army Medical Press. There were 101 patients taking a favorable turn, 48 patients being cured among the 149 patients in the pharmaceutical composition of the invention group after taking the composition for three months. The total effective examples were 149 and the total effective rate was 75.3%. The ineffective examples were 49 which is 24.7% of the total sample. In 209 examples which the patients took Ginseng Royal Jelly, after taking it for three months, 23 men had taking a favorable turn, 3 men were cured. The total effective examples were 26, the total effective rate was 12.4%. The ineffective examples were 183 with the ineffective rate was 87.6%. Comparative results showed as table 7.**

Table 7

Group	Number of Examples	Effect		Cured		Ineffect		Total effective rate	
		No.	%	No.	%	No.	%	No.	%
A	198	101	51.0	48	24.2	49	24.8	149	75.3*
B	209	23	11.0	3	1.4	183	87.6	26	12.4

* Comparing with the Ginseng Royal Jelly group $p<0.05$.

The experimental results in table 7 indicated that the clinical

therapeutic effect on prostatauxe of the pharmaceutical composition of the invention was significantly better than that of Ginseng Royal Jelly.

Experiment 6

390 patients with equal sex who had presbyopia and were 46-87 years old were chosen. They were randomly divided into two groups. Group A had 186 examples with the patients continuously taking the pharmaceutical composition of the invention 20ml made in example 9 per day for three months. Group B had 204 examples the patients continuously taking Ginseng Royal Jelly 5ml made in Fushun Qingfeng Pharmaceutical Factory 2 times per day for three months. All of the 390 examples with the patients not taking any medicine for treatment of presbyopia and operating treatment during the three months' therapeutic period.

After taking medicinal for three months, the patients were examined. The result was determined according to "Rule of diagnosis and criterions of cured or taking a favorable turn of clinical diseases" published by the People's Army Medical Press. Among the presbyopia patients of group A, there were 79 patients whose symptom of presbyopia was improved and 53 patients were cured. The total effective examples was 132. Total effective rate was 70.9%. The ineffective examples was 54. In the group B, there were 31 examples that the patients symptom of presbyopia was improved, and 4 examples that the patients were cured. The total effective example was 35, total effective rate was 17.2%. The

ineffective examples were 169. The results showed as Table 8.

Table 8

Group	Number of Examples	Effect		Cured		Ineffect		Total effective rate	
		No.	%	No.	%	No.	%	No.	%
A	186	79	42.5	53	28.5	54	29.0	132	70.9*
B	204	31	15.2	4	1.9	169	82.8	35	17.2

* Comparing with the Ginseng Royal Jelly group $p<0.05$.

The results in table 8 indicated that the clinical therapeutical effectiveness of the pharmaceutical composition of the invention was significantly better than that of the Ginseng Royal Jelly.

CLAIMS:

1. A pharmaceutical composition having anti-decrepit action, comprising extractives of traditional Chinese medicines with weight ratio:

Male bombycid (Xiongcan'e)	20-60
Cornu cervi pantotrichum (Lurong)	1-4
Genital of ass (Lushen)	1-4
Radix ginseng (Renshen)	1-6
Herba epimedii (Yinyanghuo)	1-4
Radix achyranthes bidentatae (Niuxi)	1-4

said extractives being those which are extractable using a solution of 60 to 80% alcohol.

2. A pharmaceutical composition according to claim 1, characterized in that the pharmaceutical composition also comprises the alcohol extractives of traditional Chinese medicines with weight ratio:

Semen trigonellea (Huluba)	1-5
Rhizoma curculiginis (Xianmao)	1-5
Semen cuscutae (Tusizi)	1-4
Herba cistanches (Roucongrong)	1-4
Fructus cnidii (Shechuangzi)	1-4

3. A pharmaceutical composition according to claim 1, characterized in that the pharmaceutical composition also comprises the alcohol extractives of traditional Chinese medicines with weight ratio:

Semen trigonellae (Huluba)	1-5
Rhizoma curculiginis (Xianmao)	1-5

Semen cuscutae (Tusizi)	1-4
Semen allii tuberosi (Jiucaizi)	1-4
Radix ophiopogonis (Maimendong)	1-4
Fructus foeniculi (Xiaohuixiang)	1-4
Cortex cinnamomi (Rougui)	1-4
Radix glycyrrhizae (Gancao)	1-4

4. A process for preparing a pharmaceutical composition having anti-decrepit action comprising the steps of:

(a). crushing (weight ratio):

Male bombycid (Xiongcan'e)	20-60
Cornu cervi pantotrichum (Lurong)	1-4
Genital of ass (Lushen)	1-4
Radix ginseng (Renshen)	1-6

into crude powder and adding 30 to 60% ethanol to moisten the powder, allowing the moistened powder to stand in an airtight enclosure for 12 to 36 hours, percolating the moistened crude powder by using 6 to 90 weight ratio of alcohol, and collecting the percolated solution.

(b). refluxing materials comprising of (weight ratio):

Herba epimedii (Yinyanghuo)	1-4
Radix achyranthes bidentatae (Niuxi)	1-4

for
/2-4 hours by using 60-80% ethanol which is 5 times amount of the materials and obtaining the extractive A, filtering the extractive A to obtain filtrate (1) and the residue; refluxing the residue 0.5-1.5 hours by using 60-80% ethanol which is 3 times amount of the residue to obtain extractive B, and filtering the extractive B to obtain filtrate (2); combining filtrate (1) and

(2) to obtain filtrate (3);

(c). evaporating the filtrate 3 under reduced pressure and concentrating the evaporated filtrate (3) to form a dilute extractive with a comparative density of 1.15-1.20 at 20-25 degree centigrade;

(d). combining the percolate solution in step (a) with said dilute extractive in step (c), adding medicinally acceptable carrier to obtain the pharmaceutical composition having anti-decrepit action.

5. A process for preparing a pharmaceutical composition having anti-decrepit action according to claim 4, characterized in that the materials in step (b) may also contain (weight ratio):

Semen trigonellea (Huluba)	1-5
Rhizoma curculiginis (Xianmao)	1-5
Semen cuscutae (Tusizi)	1-4
Herba cistanches (Roucongrong)	1-4
Fructus cnidii (Shechuangzi)	1-4

6. A process for preparing a pharmaceutical composition having anti-decrepit action according to claim 4, characterized in that the materials in step (b) may also contain (weight ratio):

Semen trigonellae (Huluba)	1-5
Rhizoma curculiginis (Xianmao)	1-5
Semen cuscutae (Tusizi)	1-4
Semen allii tuberosi (Jiucaizi)	1-4

Radix ophiopogonis (Maimendong)	1-4
Fructus foeniculi (Xiaohuixiang)	1-4
Cortex cinnamomi (Rougui)	1-4
Radix glycyrrhizae (Gancao)	1-4

7. A process for preparing a pharmaceutical composition having anti-decrepit action according to one of claims 4 to 6, characterized in that the pharmaceutical composition is the form of oral solution, injectable solution, capsule or tablet.

8. A pharmaceutical composition as claimed in claim 1, substantially as described in anyone of the examples hereinbefore set forth.

Patents Act 1977 Examiner's report to the Comptroller under Section 17 The Search report)	Application number GB 9321945.9
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Databases (see below) (i) UK Patent Office collections of GB, EP, WO and US patent specifications. (ii) ONLINE DATABASES: WPI, CLAIMS, JAPIO, CAS ONLINE, BIOSIS, EMBASE, MEDLINE	Documents considered relevant following a search in respect of Claims :- 1-8

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